

TECHNICAL WORK MAY NOT BEGIN PRIOR TO CO APPROVAL

NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

CONTRACTOR	CONTRACT NO./TASK NO.	JOB ORDER NUMBER	APPROV. FY
QSS Group, Inc.	NAS5- 99124 TASK NO. 403 AMENDMENT	551-344-01-22-89	01

TASK TITLE: (NTE 80 characters; include Project name)

Diffraction Optics Research

APPROVALS: (Type or print name and sign)

ASSISTANT TECHNICAL REPRESENTATIVE (OR TASK MONITOR)

Dr. David Content

DATE

10/13/2000

ORG CODE

551

MAIL CODE

551

PHONE

301-286-7382

BRANCH HEAD

Peter Maymon

DATE

10/13/00

CODE

551

PHONE

301-286-8937

CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR)

Robert S. Lebar, Jr.

DATE

10/18/00

CODE

560

PHONE

301-286-6588

FLIGHT HARDWARE, CRITICAL GSE OR SOFTWARE?

CONTRACTING OFFICER'S QUALITY REP.

DESIGNATED FAM:

IF YES, NEED CODE 303 CONCURRENCE NEXT BLOCK

[X] NO [] YES

The contractor shall identify and explain the reason for any deviations, exceptions, or conditional assumptions taken with respect to this Task Order or to any of the technical requirements of the Task Order Statement of Work and related specifications. The contractor shall complete and submit the required Reps and Certs.

(To be completed by Contracting Officer)

C.O. Requested Quote on:

Date: OCT 19 2000 25

Contractor will develop specification or statement of work under this task for a future procurement. [X] NO [] YES

Flight hardware will be shipped to GSFC for testing prior to final delivery. [X] NO [] YES [] N/A

Government Furnished Property/Facilities: [] NO [X] YES -- SEE LIST OF GFP (offsite only) / FACILITIES (onsite only)

Onsite Performance: [] NO [X] YES If yes: [X] TOTAL [] PARTIAL If partial, indicate onsite work in SOW by asterisk (*)

Surveillance Plan Attached: [X] NO [] YES

Highlighted Contract Clauses: (to be completed by Contracting Officer)

Per Clause H.14, Task Ordering Procedure, subparagraph (f), the effective date of this task order shall be 11/1/00.

INCENTIVE FEE STRUCTURE (check one)

(See Contract NAS5-99124, Attachment K, Incentive Fee Plan)

	No. 1	No. 2	X No. 3	No. 4	No. 5
Cost	10%	50%	25%	25%	%
Schedule	15%	25%	25%	50%	%
Technical	75%	25%	50%	25%	%

(To be completed by Contracting Officer)

The target cost of this task order is \$ 76,149

The target fee of this task order is \$ 4,887

The total target cost and target fee of this task order as contemplated by the Incentive Fee clause of this contract is \$ 81,036

The maximum fee is \$ 7,142

The minimum fee is \$0.

AUTHORIZED SIGNATURE:

THIS TASK ASSIGNMENT IS ISSUED ACCORDING TO THE CONTRACT CLAUSE "TASK ASSIGNMENTS AND REPORTS"

Theresa J. Becker

SIGNATURE OF CONTRACTING OFFICER

11/22/00

DATE

Theresa J. Becker

TYPED NAME OF CONTRACTING OFFICER

CONTRACTOR'S ACCEPTANCE:

AUTHORIZED SIGNATURE

DATE

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QSS Group, Inc.

NAS5-
99124

TASK NO.
403

AMENDMENT

Applicable paragraphs from contract Statement of Work: 2E.1

STATEMENT OF WORK: (Continue on blank paper if additional space is required)

The objective of this research is the advancement of technology for diffractive optical components for space research use. These components are critical elements in spaceborne spectrographs, particularly in the ultraviolet, far-ultraviolet, and soft x-ray spectral regions.

Using his experience in characterizations of both components and optical systems for the extreme ultraviolet through near infrared spectral regions; vacuum technology; optical alignment; basic electronics and computer/instrument interfacing, including LabView software; experimental spectroscopy, including lamps, monochromators, and lasers; data analysis and report generation, including IDL software; and manuscript preparation and presentation the contractor shall provide the following services:

1. Operation, refinement, and documentation of the ultraviolet scatterometer instrument in the diffraction grating evaluation lab (DGEF).
2. Specific operation of this instrument (acronym FAUST) for the flight and laboratory evaluation samples from the SORCE and COS instruments;
3. Further characterization and reporting on the extensive collection of grating samples arising out of the HST/STIS grating development program.
4. Advance metrology instrumentation capable of measuring groove characteristics of gratings.
5. Development of models capable of predicting grating performance (emphasizing scatter and efficiency) based on grating groove metrology.

PERFORMANCE SPECIFICATIONS:

Reports and Documents: Technical performance will be based on thoroughness and completeness of written reports. Performance is acceptable when the ATR is satisfied that the material reflects the proper level of technical expertise and meets the objectives of the activity. Acceptable format is pdf or Microsoft Office compatible.

SPIE presentation must cover the design, calibration, and results from the scatterometer. The unique and state of the art aspects of this device must be documented for archival purposes. Demonstration of calibration of scatter over at least 5 orders of magnitude of sensitivity must be documented over at least the spectral range of 160-633 nm.

Scatter measurements: Minimal requirements for this scatterometer include:

Demonstration of the ability to measure scatter over at least 5 orders of magnitude from of a high quality mirror in the FUV (120-190 nm) and 6 orders in the UV (200-350 nm). Demonstration of repeatability of scatter to 5% level.

Technical Progress Report: Performance is acceptable when the ATR is satisfied they are being kept informed of the status of the work performed and of issues requiring their attention.

Management: Performance will be measured against the following metrics: (1) accomplishment of objectives; (2) clear, incremental progress; (3) responsiveness to issues; (4) efficient and appropriate staffing; (5) coordination with and good and other working relationship with ATR related contractor efforts, if applicable.

Grating measurements: shall include procedure, requirements, analysis, and results and be provided in pdf or Microsoft Office compatible format.

APPLICABLE DOCUMENTS:

None.

TASK END DATE: 9/30/01

MILESTONES/DELIVERABLES AND DATES:

1. Completion of scatter measurements on EOS/SORCE/SOLSTICE flight and lab diffraction gratings by 4 months after receipt of the gratings from the project
2. Completion of scatter measurements on HST/COS flight and lab diffraction gratings by 4 months after receipt of the gratings from the project
3. Completion of scatter measurements on new technology diffraction gratings and mirrors by 4 months after receipt of the gratings from the project
4. Presentation of results to date at the SPIE 2001 annual meeting, diffractive optics conference 7/29/01-8/3/01
5. Quarterly Reports
6. Technical Progress Report: Monthly, 15th of the month

PERFORMANCE STANDARDS:

Schedule: On-time delivery of the deliverables and completion of the milestones.

Technical: ATR's acceptance of the above

FINAL DELIVERY DESTINATION (NAME, BLDG, ROOM):

Dr. David Content, building 5, room C322